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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,084	07/15/2003	Wendell B. Colson	1896/US/3	9262

20686 7590 08/08/2005

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EXAMINER

YAO, SAMCHUAN CUA

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/621,084

Applicant(s)

COLSON ET AL.

Examiner

Sam Chuan C. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 22-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 10-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11-18-4&12-5-3.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-21, drawn to an apparatus for forming a woven-appearing non-woven fabric, classified in class 156, subclass 443.
  - II. Claims 22-33, drawn to an apparatus for wrapping weft yarn around a cylindrically configured sheet warp yarns, classified in class 156, subclass 477.1
  - III. Claims 34-44, drawn to a method for forming a woven-appearing non-woven fabric, classified in class 156, subclass 177.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the limitation "*an elongated tube rotatable about its longitudinal axis ...*" is not required in the combination. The subcombination has separate utility such as using the recited subcombination for making a fiber-reinforced tubing.
3. Inventions III and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be

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practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed can be used to practice another and materially different process such as using the recited apparatus for making a fiber reinforced tube.

4. Inventions I and III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the process as claimed can be practiced by another materially different apparatus such as forming a warp sheet into a cylindrical configuration without using an endless transfer belt.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Gary Polumbus on 07-26-05 a provisional election was made without traverse to prosecute the invention of Group I (claims 1-21).

Affirmation of this election must be made by applicant in replying to this Office action.

Claims 22-44 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usui (US 4,265,691) in view of Diehl (US 3,041,230) or WO 01/21383 A1.

In light of the limitation "*a supply roll of ... a warp sheet*" (emphasis added), a roll of warp yarns defining a warp sheet is taken to be a component of the recited apparatus claims.

Usui, drawn to an apparatus for making a net-like fabric, substantially discloses an apparatus recited in claims 1-2 (col. 2 line 47 to col. 4 line 13; figures 1-3 and 5). Usui differs from these claims in that, Usui does not teach "*a supply roll of substantially parallel warp yarns defining a warp sheet*". However, it would have been obvious in the art to modify a system of Usui by providing "a supply roll of substantially parallel warp yarns defining a warp sheet", wherein the warp sheet is coated with an adhesive, to a system of Usui, because: it is old in the art to form a non-woven fabric using a system which *includes* "*a supply roll of substantially parallel warp yarns defining a warp sheet*", wherein the warp sheet is coated with an adhesive as exemplified in the teachings of either Diehl (figures 1 and 36) or WO '383 (abstract; claim 1; page 7 figures 1-4). None, but only the

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expected result of providing a supply of substantially parallel warp yarns would have been achieved in a making a system or a modified system of Usui.

With respect to claim 3, it is a common practice in the art to bond warp yarns and weft yarns using a hot-melt adhesive. Hence, it would have been obvious in the art to use a hot-melt adhesive in forming a net-like fabric of Usui. It directly follows that, it would have been obvious in the art to provide a heater to a system of Usui in order to activate a hot-melt adhesive coating on a warp sheet.

With respect to claim 4, it is well within the purview of choice in the art to select a desired location for a heater. Moreover, since weft yarns are deposited over a core (23; taken to be a mandrel), it would have been an obvious expediency in the art to provide a heater to the core so that the hot-melt adhesive is activated as weft yarns are wound around a folded adhesive coated warp sheet.

With respect to claims 5-6, in order to reduce a hardening time for a thermo-activated adhesive, it would have been obvious in the art to incorporate a cooling means in a modified system of Usui. A preference on where to place a cooling system is taken to be well within the purview of choice in the art.

With respect to claim 7, see figures 3-5 of the Usui patent.

With respect to claims 8-9, the limitations in these claims are taken to be old in the art for folding a sheet into a substantially cylindrical configuration. A preference on whether to use a ring (14) suggested Usui or another known effective means for folding a sheet is taken to be well within the purview of choice in the art.

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***Allowable Subject Matter***

8. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

While a weft applicator means of either Usui or Diehl include a rotatable ring surrounding warp yarns and further includes a plurality of weft yarn spools, there is no suggestion in the art to use a weft applicator having a rotatable "elongated tube" to a modified system of Usui. For this reason, the subject matter in claim 10 taken as a whole is allowable.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

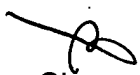
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam Chuan C. Yao  
Primary Examiner  
Art Unit 1733

Scy  
08-04-05